

REMARKS

Claims 1 and 2 are pending in this application. By this Amendment, claims 1 and 2 are amended.

Entry of the amendments is proper under 37 C.F.R. §1.116 since the amendments: (a) place the application in condition for allowance (for the reasons discussed herein); (b) do not raise any new issue requiring further search and/or consideration (since the amendments amplify issues previously discussed throughout prosecution); (c) do not present any additional claims without canceling a corresponding number of finally rejected claims; and (d) place the application in better form for appeal, should an appeal be necessary. The amendments are necessary and were not earlier presented because e.g. they are made in response to arguments raised in the final rejection. Entry of the amendments is thus respectfully requested.

Applicant appreciates the courtesies shown to Applicant's representatives by Examiner Jackson in the January 23 personal interview. Applicant's separate record of the substance of the interview is incorporated into the following remarks.

II. INFORMATION DISCLOSURE STATEMENT

An Information Disclosure Statement with Form PTO-1449 was filed in the above-captioned patent application on February 25. Applicant has not yet received from the Examiner a copy of the Form PTO-1449 initialed to acknowledge the fact that the Examiner has considered the disclosed information. The Examiner is requested to initial and return to the undersigned a copy of the Form PTO-1449. For the convenience of the Examiner, a copy of that form is attached.

III. THE CLAIMS DEFINE PATENTABLE SUBJECT MATTER

The Office Action rejects claims 1 and 2 under 35 U.S.C. §102(e) and alternatively §103(a) over U.S. Patent No. 5,696,386 to Yamazaki; and claims 1 and 2 under 35 U.S.C.

§103(a) over Yamazaki in view of U.S. Patent No. 5,372,958 to Miyasaka et al. These rejections are respectfully traversed.

Yamazaki does not teach, disclose or suggest "an effective doping concentration of the crystallized semiconductor layer figuring $1 \times 10^{18} \text{ cm}^{-3}$ or less and the crystallized semiconductor layer having the thickness of 9 nm to 135 nm, which prevents the spread of depletion layers from being constrained at the interface between crystallized semiconductor layer and the underlevel protection layer, concentration of trapping states and crystal defects in the crystallized semiconductor layer, and concentrations of doping ions therein defining the effective doping concentration," as recited in claim 1, and as similarly recited in claim 2.

The Applicant has discovered that concentration of trapping states and crystal defects function the same as donor ions and acceptor ions, the spread of the depletion layer is delayed during channel formation where there are many interface states, and a threshold voltage becomes high (see page 14, line 25 - page 15, line 16 of this application). Therefore, this application has defined effective doping concentration by three parameters, namely, concentration of trapping states, crystal defects, and concentration of doping ions, and has established that the value is $1 \times 10^{18} \text{ cm}^{-3}$.

However, Yamazaki does not disclose the technical discovery that concentration of trapping states and crystal defects function the same as donor ion and acceptor ion. Therefore, it is clear that the doping level of Yamazaki does not consider the concentration of trapping states and crystal defects.

Therefore, the meaning of doping level of Yamazaki is different from the meaning of effective doping concentration of this application. Therefore, the value of the doping level disclosed by Yamazaki is not the effective doping concentration ($1 \times 10^{18} \text{ cm}^{-3}$) of this application. Specifically, the disclosure of Yamazaki does not consider "concentration of trapping states and crystal defects." Thus, the operation of this application, i.e., "which

prevents the spread of depletion layers from being constrained at the interface between the crystallized semiconductor layer and the underlevel protection layer" cannot be obtained by Yamazaki.

Miyasaka et al. does not make up for the deficiencies of Yamazaki. Instead, Miyasaka et al. merely relates to a process for fabricating a thin film semiconductor device using electronic cyclotron resonance plasma CVD.

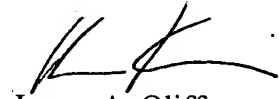
For at least these reasons, it is respectfully submitted that claims 1 and 2 are patentable over the applied references. Applicant respectfully requests that the rejections under 35 U.S.C. §102(e) and §103(a) be withdrawn.

IV. CONCLUSION

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 1 and 2 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,


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Attachment:
PTO Form 1449

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